

# Back on Track

**CHATTANOOGA'S** rebirth rests on some surprising successes—such as in technology | By Matthew Swibel



**T**HINK OF TEXTILE MANUFACTURING IN THE South and you may picture cotton mills in North Carolina. In Chattanooga, Tenn. the industry includes something very different: ESpin Technologies, a 19-employee outfit that makes nanofibers—filaments of polyester, nylon or other polymers that are only 20 to 200 nanometers wide. That's 10 to 100 times smaller than fibers made using conventional textile equipment. The microscopic whiskers can stop bacteria in a face mask or filter out water droplets in a hospital's air conditioner. Jayesh Doshi, the president and largest shareholder, has two machines—one 150 feet long, the other 75—making nanofiber. He plans to build six more.

Doshi has recruited engineers from Miami and Atlanta for his venture, but he got some key technology nearby: To perfect

the design of a filter, he got computational engineers at the SimCenter at the University of Tennessee at Chattanooga to model thousands of air- and liquid-flow variables. The research didn't cost his company a nickel, because ESpin and the SimCenter were able to tap university and federal and state government grant programs for small business.

It's not just Mountain View and Austin that attract high-tech jobs; it's backwoods towns like Chattanooga and Boise. The less glamorous locales may not have as much homegrown science, but they make up for that with other attractions, like cheap land and easy access to the Interstate highway system. Doshi, 47, cites both as reasons he chose Chattanooga as home for his ten-year-old firm. The town's comeback is still a work in progress: Good scores for business costs combined with mediocre scores for living expenses and colleges put it in position number 130 on

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FORBES' annual ranking of the best places for business (go to [www.forbes.com/bestplaces](http://www.forbes.com/bestplaces)).

Chattanooga might easily have become just another depressed Rust Belt hulk. Once one of the country's worst-polluted cities (because of metals manufacturing), it recently got mentioned by CBS television as being an eco-friendly destination, in the same breath as the Galapagos Islands and Burlington, Vt. Chattanooga is getting 28 miles of bike routes. A fleet of electric shuttle buses carries a million passengers a year.

The city lost 10% of its population in the 1980s, as manufacturing jobs drifted offshore. But since 2000 the number has rebounded 8% to 170,000. Unemployment, at 4.3%, compares

The buzz and bucolic scenery drew furniture maker Stephen Culp, 38, to Chattanooga from Palo Alto in 2001. While at Stanford Law School he saw friends with Internet jobs "get rich and then repossessed," so he was determined to pursue his business in a town with a slower pace. Culp thought of Chattanooga, where he'd lived from age 7 to 11. His company, Smart Furniture, takes orders over the Internet for semicustomized office and home furniture. That is, it sells bookshelves and entertainment centers the way Dell sells computers.

He has raised \$10 million, mostly from local venture capitalists, and has hired his fortieth headquarters employee; there are 120 factory workers elsewhere in Tennessee. His chief designer he recruited

from Miami. "Chattanooga is an entrepreneurial engine just about hitting 2,500rpm—a little like Palo Alto in the mid-1990s, but a lot more steady," he says.

The tide started to turn at the water's edge. For two decades, beginning in 1985, the city worked to clean up a blighted 13-mile industrial corridor along the Tennessee River, a stretch so filthy that motorists

**Blue Cross' new HQ (far left) rises against the Chattanooga skyline. SimCenter (below, left) and ESpin Technologies (below, right) embody innovation. Amenities include pedestrian bridges and a new art museum.**

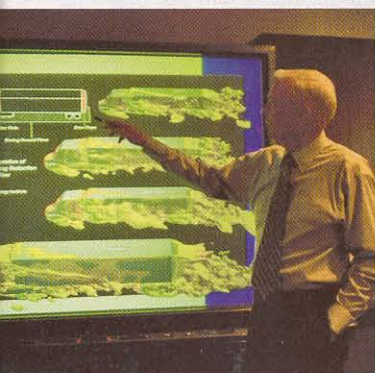
used to have to use their headlights during the day. Acres once dotted with radiator, tire and bottling plants were transformed at a cost of \$120 million into parkland. Over \$2 billion has been invested in downtown development, including the restoration of a near-bankrupt hotel (the Chattanooga Choo-Choo) on the site of the city's former rail terminal, and the Tennessee Aquarium, home to the world's largest freshwater tank. The city claims tourist revenue of \$690 million a year.

Robert Corker was mayor of Chattanooga before being elected a U.S. senator in 2006. With help from Representative Zach Wamp he cajoled \$7 million from private donors and promised more federal money down the road to get SimCenter ("Sim" for "simulation") going in 2002. It keeps 19 researchers working in fields like nano-

technology and fuel cells. The Tennessee Valley Authority, a big Chattanooga employer, is taking the output from the 5-kilowatt solid oxide fuel cell that the center is experimenting with. There's something to be said for earmarks, if you are on the receiving side: Last year Wamp tacked \$3.5 million into a defense bill to pay for a 100-kilowatt cell.

The center lends its intelligence to problems far more prosaic. "I never thought I'd be involved in supercomputing," says Max Fuller, chairman of trucker U.S. Xpress, which employs 1,100 at its Chattanooga headquarters. Since 2006 his company has spent \$200,000 on simulations to reduce drag on its tractor-trailers. Hood-mounted mirrors have been relocated, the space between the cab and trailer narrowed, and perforated mud flaps tested. Result: Trucks get 2 miles more per gallon. Says Fuller: "When you are buying \$40 million a month in fuel, it gets more interesting."

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with 4.8% for the nation. A lot of little firms like ESpin have added jobs; so have a few giants like insurers Cigna and Unum.

Bulldozers and backhoes are at work on Blue Cross Blue Shield of Tennessee's new \$300 million headquarters on a leafy northern bluff overlooking downtown. The company turned down a site in the suburbs partly because it takes only 15 minutes during rush hour to get here from managers' lakefront homes in the surrounding hills.

The collapse of home prices isn't being felt in Chattanooga the way it is in California or Florida because prices never got very feverish here (they were up only 5.2% between 2000 and 2005, versus 16.7% in San Diego). Downtown a total 40% of condos at 30 different developments are under contract. These include the 107-unit Museum Bluffs Parkside (\$360,000 to \$1.6 million), condos going up near the newly expanded Hunter Art Museum, and the BridgeView development at the end of Market Street Bridge.